

Listing of Claims:

1. (currently amended) A flame-retarding and smoke-suppressing article of manufacture comprising, by weight:

a cloth fabric 33.0 to 1400.0 grams per square meter;

an adhesive binder 12.0 to 1050.0 grams per square meter of the cloth fabric; and

an additive powder 120.0 to 6250.0 grams per square meter of the cloth fabric, the additive powder impregnating the cloth fabric and further comprising, by weight:

a phosphate-based catalyst 30.0 to 41.0%;

a carbonific 22.0 to 29.0%;

a blowing agent 15.5 to 17.5%;

a cementitious inorganic binder 21.0 to 25.0%; and

a ceramic 2.50 to 5.00%.

2. (original) The article of manufacture of claim 1 wherein the phosphate-based catalyst is selected from the group consisting of ammonium polyphosphate, tris(beta-chloroethyl) phosphate, guanidine phosphate, urea phosphate, melamine phosphate, monoammonium phosphate, diammonium phosphate and mixtures thereof.

3. (original) The article of manufacture of claim 1 wherein the carbonific is selected from the group consisting of dipentaerythritol, tridipentaerythritol, pentaerythritol, pentaerythritol polyurethane, phenol, triethylene glycol, resorcinol, inositol, sorbitol, dextrin, and starch.

4. (original) The article of manufacture of claim 1 wherein the blowing agent is selected from the group consisting of urea, butyl urea, benzene sulfonyl-hydrazide, melamine, chloroparaffin, guanidine, glycine, and secondary carbonifics.

5. (original) The article of manufacture of claim 4 wherein the secondary carbonifics include chlorine containing material.

6. (original) The article of manufacture of claim 5 wherein the chlorine containing material is selected from the group consisting of a chlorinated paraffin, and a mixture of a chlorinated paraffin containing about 70%, by weight, of chlorine and a chlorinated paraffin containing about 40% by weight, of chlorine, with a weight ratio of 70% chlorinated paraffin to 40% chlorinated paraffin is about 2:1.

7. (original) The article of manufacture of claim 1 wherein the cementitious inorganic binder includes calcium aluminate cement and silica flour.

8. (original) The article of manufacture of claim 1 wherein the ceramic is selected from the group consisting of ceramic spheres, and silica spheres.

9. (original) The article of manufacture of claim 8 wherein the spheres are in a range of 10 to 500 micron in diameter.

10. (original) The article of manufacture of claim 1 wherein the adhesive binder is a resin.

11. (original) The article of manufacture of claim 10 wherein the resin is selected from the group of styrenic, olefinic, acrylic, cellulosic, polyester, phenolic, rosin, shellfish resin, polyamide, an aliphatic adhesive binding compound, and an aromatic organic adhesive binding compound.

12. (original) The article of manufacture of claim 10 wherein the resin is a thermoset resin.

13. (original) The article of manufacture of claim 10 wherein the resin is a curable resin.

14. (original) The article of manufacture of claim 10 wherein the resin is a thermoplastic.

15. (currently amended) The article of manufacture of claim 1 wherein the cloth fabric is selected from the group of woven glass rovings, woven yarns, veils, cloths, surfacing mattes, non-woven fabric, woven fabrics, knitted fabrics, all glass fabrics, Kevlar KEVLAR® (poly-paraphenylene terephthalamide) fabrics, ceramic fabrics, ~~Nemex~~ NOMEX® (meta-aramid, poly(meta-phenyleneisophthalamide)) fabrics, basalt fabrics, and air texturized fabrics.

16. (original) The article of manufacture of claim 1 wherein the additive powder forms an external fire-retarding layer on the cloth fabric and the adhesive resin forms a reinforced layer on the cloth fabric.

17. (original) The article of manufacture of claim 1 wherein the additive powder is in a form of an aqueous slurry applied to the cloth fabric.

18. (original) The article of manufacture of claim 1 wherein the additive powder is in a form of an aqueous slurry applied to the cloth fabric by dipping.

19. (original) The article of manufacture of claim 1 wherein the additive powder is in a form of an aqueous slurry applied to the cloth fabric by roll coating.

20. (original) The article of manufacture of claim 1 wherein the additive powder is in a form of an aqueous slurry applied the cloth fabric by a knife-over fabric coater.